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In The Supreme Court of the United States

KSR INTERNATIONAL CO.,

Petitioner,

v.

TELEFLEX INC. and
TECHNOLOGY HOLDING CO.,

Respondents.

On Writ Of Certiorari To The United States Court Of Appeals For The Federal Circuit

BRIEF OF ECONOMISTS AND LEGAL HISTORIANS AS *AMICI CURIAE* IN SUPPORT OF PETITIONER

August 22, 2006

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INTEREST OF THE *AMICI CURIAE*

This brief is filed on behalf of the Economists and Legal Historians identified in Appendix A (Historians).[1] Historians teach and write about technological development and United States patent laws. Historians are concerned that the standards currently applied to determine obviousness by the U.S. Court of Appeals for the Federal Circuit (Federal Circuit), and thus by the U.S. Patent and Trademark Office (Patent Office), conflict with historic standards of this Court. The Court's standards have required new inventions to make a substantial technological contribution to the art in order to be patentable, and thus have helped to assure technological progress in the United States. By reviewing the history of the obviousness standard, Historians hope to assist the Court in re-establishing appropriate thresholds of technological creativity and in providing guidance for the Patent Office and courts to determine which new inventions warrant patents.

SUMMARY OF THE ARGUMENT

The Patent Office originally and this Court subsequently articulated a substantial technological threshold for the level of inventive contribution that warrants the grant of a patent. The Court later held this threshold to be a constitutional requirement. Otherwise, patents would withdraw from unrestricted use inventions that the public already constructively possessed and would thereby retard rather than promote technological progress. Before

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[1] Petitioner's and Respondents' letters of consent have been filed with the Clerk. This brief was not authored in whole or in part by counsel for any party. No one other than *Amici* and their counsel made a monetary contribution to preparing or submitting this brief.

1952, the Court repeatedly held: that new inventions (particularly combinations of prior art elements) were unpatentable even though they had not been contemplated in the art; that circumstantial evidence of technological creativity must be evaluated with care; and that exogenous changes in technology would predictably trigger rapid creation of new inventions. Congress ratified the Court's precedents on the inventive threshold in 1952, when codifying the obviousness standard in Section 103 of the Patent Act.

In *Graham v. John Deere Co.*, 383 U.S. 1 (1966), the Court articulated the purpose of the obviousness standard – to limit patents to inventions that would not have been made but for the patent incentive – and specified a methodology for applying it. Additional guidance is needed, however, for proper understanding and application of the standard. Historians suggest that the Court restate the purpose of the standard as to prohibit patents on inventions that could have been made within a reasonable period of time and within reasonable budgetary constraints. This restatement clarifies that the *Graham* methodology mandates an inquiry requiring both technical expertise and policy judgment. The proposed restatement will lead over time to more reasoned analysis by the Patent Office and the courts. In contrast, the current standards being applied by the Patent Office and the Federal Circuit – particularly the teaching, suggestion, or motivation to combine test created by the Federal Circuit and applied in this case – conflict with the Court's jurisprudence, are applied without sufficient sensitivity to the technological context at a particular time, and permit patents to issue and to be held valid for insignificant contributions to the art.

Historians further suggest that the Court clarify the proper allocation of burdens of production and proof of

obviousness. Given the limited resources of the Patent Office, the current allocation may often lead to erroneous results. At a minimum, the Court should clarify that to assess obviousness, no evidentiary burden exists to document a teaching, suggestion, or motivation to combine the prior art.

ARGUMENT

I. This Court Historically Has Imposed a Substantial Threshold of Technological Creativity for the Patentability of New Inventions

The 1790 Patent Act required the Patent Office to review applications to determine if the disclosed "invention or discovery [was] sufficiently useful and important" to warrant granting a patent. *See* Act of April 10, 1790, ch. 7, § 1, 1 Stat. 109, 110.[2] Since 1790, this Court has refused to grant or has invalidated patents unless the new technological "invention"[3] for which exclusive rights were sought resulted from substantial technological creativity. The

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[2] Congress retained this language in the Patent Act until 1952, when it was eliminated as "'unnecessary'" in light of the newly codified obviousness standard. Giles S. Rich, *The Principles of Patentability*, 42 J. Pat. Off. Soc'y 75, 80-81 (1960) (quoting 35 U.S.C.A. § 131 revision note (1954)).

[3] Historians refer to all novel creations and combinations as inventions although many cases treated only those that were patentable as inventions. Further, "inventions" or "discoveries" may not be patentable unless they are within the "useful Arts." U.S. Const., Art. I, § 8, cl. 8. *See Parker v. Flook*, 437 U.S. 584, 593 (1978) (assessment of the type of discovery must precede determination of novelty and obviousness). *Cf. Laboratory Corp. of Am. Holdings v. Metabolite Labs., Inc.*, 126 S.Ct. 2921 (2006) (dismissing as improvidently granted a subject matter challenge to a patented claim). *See generally* John R. Thomas, *The Patenting of the Liberal Professions*, 40 B.C. L. Rev. 1139, 1163-75 (1999) (discussing historic understanding of the "technological arts").

Court in this case has the opportunity to affirm this fundamental premise.

As this Court recognized in *Graham*, the three-person Patent Board under the 1790 Patent Act had created rules that categorically excluded certain types of novel inventions from being considered patentable. *See* 383 U.S. at 9, 10 & n.3 (application of a machine to a new use;[4] changes in the material of construction; changes of form; and use of previously known implements in combination).[5] The premise of these rules was that the public constructively possessed novel inventions that were within the skill in the art to create or to apply, and thus public rights to use such inventions should not be taken away by legislative grants of exclusive rights. *See* Thomas Jefferson, Letter to Isaac MacPherson (Aug. 13, 1813), *reprinted in* The Portable Thomas Jefferson at 531 (Merrill D. Peterson ed. Penguin Books 1975) (Jefferson, Letter) ("[T]his right [to use] ought not to be taken from him and given to a monopolist, because the first perhaps had occasion so to apply it."); *Brown v. Piper*, 91 U.S. 37, 41 (1875) (inventions "within the circle of what was well known before . . . belonged to the public"). This premise followed from the lack of natural rights in inventions and the limited power

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[4] This Court originally prohibited patents for processes and later permitted new-use patents and patents on processes. *Compare Wyeth v. Stone*, 30 F. Cas. 723, 727 (C.C.D. Mass. 1840), *and O'Reilly v. Morse*, 56 U.S. (15 How.) 62, 112-13 (1853), *with Cochrane v. Deener*, 94 U.S. 780, 787 (1876). Congress subsequently ratified patents for new uses of existing inventions. *See* 35 U.S.C. § 100(b) ("process . . . includes a new use of a known process, machine"); S. REP. NO. 82-1979, at 6 (1952) (discussing the process definition).

[5] *See also* Edward C. Walterscheid, *The Hotchkiss Unobviousness Standard: Early Judicial Activism in the Patent Law*, 13 J. Intell. Prop. L. 103, 107-08 (2005) (Walterscheid, *Hotchkiss*).

vested in Congress. *See id.*; *Graham*, 383 U.S. at 5-6 (Congress may neither "enlarge the patent monopoly without regard to the innovation, advancement or social benefit gained thereby" nor "authorize the issuance of patents whose effects are to remove existent knowledge from the public domain, or to restrict free access to materials already available.").

Jefferson also thought that the expertise of the Patent Office, rather than of courts, was best suited to develop the principles for determining the threshold of creativity that warranted granting exclusive rights. *See* Jefferson, Letter, *supra,* at 532. Jefferson was particularly concerned that the grant of unjustified patents would result in "harassment by lawsuits." *Id.* Jefferson's views on patent laws, however, were controversial.[6]

Congress did not at first follow Jefferson's advice, as it eliminated the examination system in the 1793 Patent Act. *See* Act of Feb. 21, 1793, ch. 11, § 1, 1 Stat. 318, 318.[7] The

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[6] *See generally* Edward C. Walterscheid, *The Use and Abuse of History: The Supreme Court's Interpretation of Thomas Jefferson's Influence on Patent Law,* 39 IDEA 195 (1999).

[7] *See* Edward C. Walterscheid, *To Promote the Progress to Useful Arts: American Patent Law and Administration, 1787-1836 (Part I),* 79 J. Pat. & Trademark Off. Soc'y 61, 72-74 (1997) (describing the transition from an examination to a registration system based on the English patent system). Congress did agree that "simply changing the form or the proportions . . . in any degree, shall not be deemed a discovery." Act of Feb. 21, 1793, ch. 11, § 2, 1 Stat. 318, 321. *See Evans v. Eaton,* 8 F. Cas. 846, 852 (C.C.D. Pa. 1816) (the requirement limited patentability to changes in "principles" of invention), *rev'd on other grounds,* 16 U.S. (3 Wheat.) 454 (1818); *Evans v. Eaton,* 20 U.S. 356, 431 (1822) (same). *See* Walterscheid, *Hotchkiss, supra,* at 108-15 (discussing doctrinal changes resulting from this language). In 1836, Congress eliminated this provision, but the Court continued to invalidate patents that had issued for such inventions. *See id.* at 116; Act of July 4, 1836, ch. 357, § 2, 5 Stat. 117, 118.

federal courts thus took up the task of elaborating the required threshold of technological creativity that warranted the grant of a patent.[8] Like Congress, the courts did not adopt Jefferson's views wholesale.

For example, in *Earle v. Sawyer,* 8 F. Cas. 254 (C.C.D. Mass. 1825), Justice Story upheld a patent for an improved machine for sawing shingles, which substituted a circular saw for a perpendicular saw. Justice Story rebuffed the defendant's "metaphysical" argument that the invention was unpatentable without creative ingenuity. *Id.* at 255. Moreover, he rejected the entire argument that:

> [an inventor] must find [the invention] out by mental labor and intellectual creation. If the result of accident, it must be what would not occur to all persons skilled in the art, who wished to produce the same result. There must be some addition to the common stock of knowledge, and not merely the first use of what was known before. . . . The mere putting of two things together, although never done before, is no invention.

Id. Nevertheless, even Justice Story agreed that not all new inventions were patentable. In *Whittemore v. Cutter,* 29 F. Cas. 1123 (C.C.D. Mass. 1813), Justice Story held that a new use of an existing machine or its combination with other existing machines was not, without more, a patentable invention. "[F]or if the different effects were all produced by the same application of machinery, in separate parts, and he merely combined them together, or

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[8] *Cf.* Walterscheid, *Hotchkiss, supra,* at 105, 126-32 (arguing that such judicial elaboration reflected activism that was not authorized by the statute, but that Congress ultimately ratified the Court's precedents in the 1952 Act).

added a new effect, such combination would not sustain the present patent. . . ." *Id.* at 1124.[9]

By 1836, Congress repented its earlier decision to register patents. Congress adopted an examination system to prevent the widespread issuance of invalid patents that had resulted in unjustified litigation and destruction of businesses. *See* Act of July 4, 1836, ch. 357, § 1, 5 Stat. 117, 117.[10] "Almost 10,000 patents were issued under [the 1793 Act], the majority of which were either for useless inventions or used to fraudulently impose on the public."[11] But effective examination would require the hiring of highly qualified examiners, who would be familiar with existing knowledge and technologies in the various arts in which patents were sought. *See* S. Rep. No. 24-338, at 4 (1836). Congress did not provide sufficient funds to pay required salaries, and examiners needed too much time to research prior art. Thus, although trained examiners became increasingly rigid in evaluating patentability, patent quality suffered and significant backlogs in processing developed.[12]

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[9] *See also Bean v. Smallwood*, 2 F. Cas. 1142, 1142 (C.C.D. Mass. 1843); *Howe v. Abbott*, 12 F. Cas. 656, 658 (C.C.D. Mass. 1842); *Ames v. Howard*, 1 F. Cas. 755, 757 (C.C.D. Mass. 1833).

[10] *See also* S. REP. NO. 24-338, at 1-8 (1836) (discussing the statutory provisions, changes in the economy that had made the patent system more important, and the need to "arrest injury and injustice at the threshold"); Steven Lubar, *The Transformation of Antebellum Patent Law*, 32 Tech. and Culture 932, 941 (1991) (discussing the issuance and effects of patents under the 1793 Act).

[11] Edward C. Walterscheid, *Patents and Manufacturing in the Early Republic*, 80 J. Pat. & Trademark Off. Soc'y 855, 886 (1998).

[12] *See, e.g.*, Robert C. Post, *"Liberalizers" versus "Scientific Men" in the Antebellum Patent Office*, 17 Tech. and Culture 24, 33, 37-39 (1976); Lubar, *supra*, at 945. Following a political campaign against rigid examination, scientists were replaced by political appointees who

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Pre-1850 examination practice under the American system was perceived abroad as "'a miserable failure.'"[13]

In this context, the Supreme Court decided *Hotchkiss v. Greenwood,* 52 U.S. (11 How.) 248 (1851). The case addressed a novel combination of prior art elements. The inventor had substituted known clay and porcelain door knobs for common iron knobs, employing a dovetail to secure the shank. The plaintiffs requested a jury instruction that clay knobs and shanks in the prior art had not been combined earlier and that the attachment required skill and invention to achieve the useful result (better functioning and cheaper manufacturing). *See id.* at 264. The Court upheld the trial court's actual instruction that, if the same form and purposes of knobs and attachments were known, if clay was simply substituted for metal, and if "no more ingenuity or skill [were] required to construct the knob in this way than that possessed by an ordinary mechanic acquainted with the business," then there was no patentable invention and the issued patent was invalid. *Id.* at 265.[14]

The Court rejected the argument that substitution of materials – even if it makes an invention "better and cheaper" to manufacture – makes for a patentably distinct invention. *Id.* at 266. "The difference is formal, and destitute of ingenuity or invention. It may afford evidence of judgment and skill in the selection and adaptation of the

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lowered examination standards, fueling an explosion in patenting beginning in the 1850s. *See* Post, *supra*, at 39-52.

[13] Harold I. Dutton, The patent system and inventive activity during the industrial revolution 1750-1852 61 (Manchester U. Press 1984) (citation omitted).

[14] At least one lower court had interpreted the 1836 Act to preclude patents on new combinations that were "a very obvious change to any mechanic." *Hovey v. Stevens,* 12 F. Cas. 609, 612 (C.C.D. Mass. 1846).

materials in the manufacture of the instrument for the purposes intended, but nothing more." *Id.* The Court also rejected the argument that there were unique advantages to the particular combination. *See id.* at 266-67 (noting that even if the fastening produced "a new and peculiar effect" having various benefits, the effect would be achieved by other available materials). As the Court later affirmed in *Reckendorfer v. Faber,* 92 U.S. 347 (1875), to be patentable "the results must be the product of the combination, not a mere aggregate of several results, each the complete product of one of the combined elements." *Id.* at 353 (citing *Hailes v. Van Wormer,* 87 U.S. (20 Wall.) 353 (1873)). *See also Dunbar v. Myers,* 94 U.S. 187, 199 (1876) (change of "form, proportions, or degree, or the substitution of equivalents," does not make an invention patentable, even though they "may produce better results") (citing *Smith v. Nichols,* 88 U.S. (21 Wall.) 112, 115 (1874)).

Hotchkiss was decided during a period of remarkable technological change, when invention and innovation were highly valued.[15] The Court's holding should be no surprise, as the justification for a high creative threshold "rests in part on the existence of change in social needs, conditions and technology . . . [and] should be less important in a static society or one experiencing only very gradual change."[16] In *Atlantic Works v. Brady,* 107 U.S. 192 (1883),

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[15] *See, e.g.,* B. Zorina Khan, *Property Rights and Patent Litigation in Early Nineteenth-Century America,* 55 J. Econ. Hist. 58, 70-71 (1995) (also noting changing judicial attitudes over the course of the 19th Century).

[16] John F. Duffy & Robert P. Merges, *The Story of* Graham v. John Deere Company: *Patent Law's Evolving Standard of Creativity,* in Intellectual Property Stories at 114 (Jane C. Ginsberg & Rochelle C. Dreyfuss eds. Foundation 2006). *See* Robert M. Hunt, Federal Reserve Bank of Philadelphia, Nonobviousness and the Incentive to Innovate: An Economic Analysis of Intellectual Property Reform, Working Paper

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Justice Bradley provided a detailed conceptual justification for setting the threshold of technological contribution above "ordinary mechanical or engineering skill," which precluded patents on inventions that "would naturally and spontaneously occur. . . ." *Id.* at 200. Otherwise, "[s]uch an indiscriminate creation of exclusive privileges tends rather to obstruct than to stimulate invention. It creates a class of speculative schemers . . . [who anticipate improvements and use their patent monopolies] to lay a heavy tax upon the industry of the country, without contributing anything to the real advancement of the art." *Id.* *See id.* (such patents "embarrass[] the honest pursuit of business with fears and apprehensions of concealed liens and unknown liabilities to lawsuits and vexatious accountings for profits made in good faith"); *Great Atl. & Pac. Tea Co. v. Supermarket Equip. Corp.*, 340 U.S. 147, 152-53 (1950) (patents on combinations of "old elements with no change in their respective functions" withdraw "what already is known into the field of its monopoly and diminish[] the resources available to skillful men."). The Court in *Graham* therefore treated the prohibition of patents on obvious inventions as a constitutional requirement. *See* 383 U.S. at 6.[17]

No. 99-3 (Mar. 1999) (explaining how reducing nonobviousness requirements can lead to reductions in research and development activity, particularly in rapidly innovating industries). *Cf.* John H. Barton, *Reforming the Patent System*, 287 Science 1933, 1933 (2000) (limiting patents on minor inventions reduces patent system costs "without any effect on the incentives provided for more important innovation").

[17] *But cf.* Walterscheid, *Hotchkiss*, *supra*, at 124-26 (arguing that the Court in *Graham* interpreted the Constitution to impose a requirement of inventive contribution beyond novelty, but did not justify the obviousness standard on this requirement). Mr. Walterscheid believes, however, that the Constitution does require such a prohibition and that *Graham* should have been decided on this basis. Email from Edward C. Walterscheid to Joshua D. Sarnoff (Aug. 21, 2006).

In the second half of the 19th Century and the first half of the 20th Century, the Court solidified its decisions on the high inventive threshold for patentability, repeatedly holding that significant technological creativity was required above the ordinary skill in the art (as reflected by a substantial change to prior art applications or functions).[18] The fact that the "new form of result ha[d] not before been contemplated" (what the Federal Circuit has characterized as a teaching, suggestion, or motivation to combine the prior art[19]) did not suffice for patentability. *Penn. R. Co.*, 110 U.S. at 494. Even without prior contemplation of the combination and economic motivations to make it, the invention had to reflect a sufficient technological advance beyond what ordinary skill could create. Accordingly, the Court (unlike the Federal Circuit) has treated skill in the art and prior contemplation as cumulative or disjunctive hurdles.[20]

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[18] *See, e.g., The Packing Company Cases*, 105 U.S. 566, 571-72 (1881) (citing *Pearce v. Mulford*, 102 U.S. 112, 118 (1880)); *Penn. R. Co. v. Locomotive Eng. Safety Truck Co.*, 110 U.S. 490, 494 (1884); *Florsheim v. Shilling*, 137 U.S. 64, 76 (1890); *Saranac Automatic Mach. Corp. v. Wirebound Patents Co.*, 282 U.S. 704, 713 (1931) (citing *Hollister v. Benedict Mfg. Co.*, 113 U.S. 59, 72-73 (1885)); *Cuno Eng. Corp. v. Automatic Devices Corp.*, 314 U.S. 84, 89-90 (1942).

[19] *See Teleflex Inc. v. KSR Int'l, Inc.*, 119 Fed. Appx. 282, 285-86 (Fed. Cir. 2005) (citing, *inter alia*, *Tec Air, Inc. v. Denso Mfg. Mich. Inc.*, 192 F.3d 1353 (Fed. Cir. 1999); *Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1572 (Fed. Cir. 1996)).

[20] *See, e.g., Textile Mach. Works v. Louis Hirsch Textile Mach.*, 302 U.S. 490, 497 (1938) ("the addition [of a new element to a combination] must be the result of invention rather than the mere exercise of the skill of the calling, *and* not one plainly indicated by the prior art") (emphasis added); *Altoona Publix Theaters, Inc. v. Am. Tri-Ergon Corp.*, 294 U.S. 477, 486 (1935) (improvements "must be the result of invention, and not the mere exercise of the skill of the calling *or* an advance plainly indicated by the prior art") (citing *Electric Cable Joint Co. v. Brooklyn Edison Co.*, 292 U.S. 69, 79-80 (1934)) (emphasis added).

Proof of the existence in the prior art of all of the parts of the combination thus was normally sufficient to demonstrate that the invention was unpatentable,[21] unless the patentee introduced evidence to show that an unexpected function had resulted. In that case, the Court would carefully scrutinize the evidence of an unexpected function and arguments that the function had resulted from the application of more than ordinary skill.[22] Similarly, the Court would carefully scrutinize arguments that evidence of commercial success demonstrated that ordinary skill was insufficient to make the combination. As the Court recognized, commercial success can result from many sources, and even success attributable to the invention does not necessary demonstrate a sufficient technological contribution.[23] Thus, the Court rarely credited

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[21] *See, e.g., Honolulu Oil Corp. v. Halliburton*, 306 U.S. 550, 562 (1939) ("[T]he method claimed in suit was clearly indicated in the prior art. It cannot reasonably be held that anything more than mechanical skill . . . would be required to suggest the [last step, which was known from other prior art patents].").

[22] *See, e.g., Powers-Kennedy Contracting Corp. v. Concrete Mixing & Conveying Co.*, 282 U.S. 175, 184 (1930) (noting the lack of evidence of prior impracticability and the "presumption of operability from . . . patenting"); *id.* at 184-85 (rejecting arguments of inventiveness based on a change in size, which involved "no more than mechanical skill and would not amount to invention"); *Toledo Pressed Steel Co. v. Standard Parts*, 307 U.S. 350, 356 (1939) (concluding "[o]n the records before us, it is impossible to hold that production of the patented device [a 'mere aggregation'] required more than mechanical skill and originality attributable to those familiar with the art").

[23] *See, e.g., Textile Mach. Works*, 302 U.S. at 498-99 ("success may be decisive where invention is in doubt, but an insuperable obstacle . . . here is our inability . . . to say 'that an art which knew how to [use the prior art elements] . . . required some uncommon talent merely to conceive of combining the two' ") (citation omitted); *Saranac Automatic Mach. Corp.*, 282 U.S. at 713-14 (rejecting commercial success evidence because the patented invention did not "embrace[ ]" a "new result" and did not "involve invention"); *Great Atl. & Pac. Tea Co.*, 340 U.S. at 153 (rejecting lower court reliance on evidence that the invention "filled

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circumstantial evidence of commercial success when direct evidence suggested that sufficient skill existed in the art.[24]

Finally, as the Court recognized in *Concrete Appliances Co. v. Gomery*, 269 U.S. 177 (1925), a novel combination may become apparent when exogenous developments in technology occur or when a new motivation to apply existing technology arises, resulting in the nearly simultaneous invention of similar or identical subject matter. A few years prior to the invention at issue in that case, the use of wet concrete had become the norm in building practices and prior art devices for moving grain and similar substances had been adapted for use with wet concrete. *See id.* at 182. Once the feasibility of using wet concrete was established, "common experience in the mechanical arts would lead one to expect that ... the mechanical skill of those familiar with engineering and building problems would seek to make use of known methods and appliances...." *Id.* at 184. Given the exogenous technological developments, the independent and nearly simultaneous creation of a novel combination and the existence of competing patent applications provided "persuasive evidence" to demonstrate the lack of patentable creativity. *Id.* at 185.

In 1952, Congress codified the Court's high threshold of inventive creativity, prohibiting patents on new inventions that were "obvious" differences from the prior art. *See* Act

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a long-felt want and has enjoyed commercial success" because "commercial success without invention will not make patentability"); *Sakraida v. Ag Pro, Inc.*, 425 U.S. 273, 282-83 (1976) (production benefits and commercial success "'did not produce a "new or different function" ... within the test of validity of combination patents.' ... These desirable benefits 'without invention will not make patentability.'") (citations omitted).

[24] *See, e.g., Altoona Publix Theaters*, 294 U.S. at 487-88 (lack of invention "would have to be far more doubtful ... to be aided by evidence of commercial success, indicating that it brought realization of a long-felt want").

of July 19, 1952, ch. 950, § 103, 66 Stat. 792, 798 (currently codified at 35 U.S.C. § 103(a)). Congress provided that:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

35 U.S.C. § 103(a). As the Court held in *Graham*, "the revision was not intended by Congress to change the general level of patentable invention . . . [but] was intended merely as a codification of judicial precedents" including *Hotchkiss*. 383 U.S. at 17. *See id.* at 3-4.[25]

Accordingly, in *Anderson's-Black Rock, Inc. v. Pavement Salvage Co.*, 396 U.S. 57 (1969), the Court held that the invention at issue merely combined the functions of separate machines into one machine, which was "not critical or essential to the functioning" but rather was only "a matter of great convenience[that] did not produce a 'new or different function . . . within the test of validity of combination patents.'" *Id.* at 60 (quoting *Lincoln Eng. Co.*

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[25] The enacted provision also included that "[p]atentability shall not be negatived by the manner in which the invention was made." 35 U.S.C. § 103(a). This additional language should not be understood as altering the Court's prior standard for the objective technological contribution required. Rather, it reflects only legislative rejection of the subjective "flash of creative genius" formulation articulated in *Cuno Eng. Corp.*, 314 U.S. at 91, which the Court in *Graham* subsequently held was only a "rhetorical embellishment" of the *Hotchkiss* standard. 383 U.S. at 15 n.7. *Cf. Densmore v. Scofield*, 102 U.S. 375, 378 (1880) (quoting appellant's argument that the invention lacked "'a flash of thought'"); *Earle*, 8 F.Cas. at 255 (rejecting consideration of "mental labor").

of Ill. v. Stewart-Warner Corp., 303 U.S. 545, 549 (1938)). *See id.* at 59 (placing all the components together "is relevant to commercial success, not to invention"). Similarly, in *Sakraida*, the Court held that, by rearranging old elements to perform the same functions, the invention might "perhaps produc[e] a more striking result" but "[s]uch combinations are not patentable under standards appropriate for a combination patent." 425 U.S. at 282. *See id.* at 281-82 (dismissing evidence of improved function that had been relied on by the Court of Appeals to reverse the District Court).

II. The *Graham* Approach to Determining Patentability is Sound, But Requires Further Clarification for Its Proper Understanding and Application by the Patent Office and the Courts.

As the Court held in *Graham*, the purpose of the obviousness standard is "to develop some means of weeding out those inventions which would not be disclosed or devised but for the inducement of a patent." 383 U.S. at 11.[26] This statement of purpose takes into account the different incentives that exist to make inventions and the different means of appropriating returns from inventions.[27]

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[26] *Cf.* Edmund Kitch, *Graham v. John Deere Co.: New Standards for Patents*, 1966 Sup. Ct. Rev. 293, 301 (recommending an "unlikely to be developed" standard and noting that obviousness analysis "does not view the inducement of investment . . . as an appropriate function of the patent system"); John Schlicher, Patent Law: Legal and Economic Principles at 5-7 (West 1992) (arguing that § 103 forbids patents "where the cost and risk of independent research to obtain an invention are low enough that an ordinary researcher would be expected to incur them at about the same time without the additional incentive of a patent").

[27] *See, e.g.*, John H. Barton, *Non-Obviousness*, 43 IDEA 475, 491-93 (2003) (Barton, *Non-Obviousness*) (citing Wesley M. Cohen et al.,

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This statement of purpose, however, does not readily distinguish when the patent incentive is needed, given that "there is little doubt that . . . routine research would be done in the absence of a patent system, assuming the market is important enough."[28]

This statement of purpose, moreover, fails to articulate a relevant time frame over which to assess whether new inventions would otherwise have been "disclosed or devised." *See Atl. Works*, 107 U.S. at 200 (ordinary mechanics continuously make improvements and thus inventions "naturally and spontaneously occur"). The legislative language requires only that the judgment of obviousness must be based on the state of the art "at the time the invention was made." 35 U.S.C. § 103(a). But obviousness must be assessed by evaluating what will occur in the future (based on analysis informed by looking at the past). Because the articulation in *Graham* does not *directly* address how quickly the art would develop, the Patent Office and the courts have failed adequately to consider how quickly the invention might spontaneously occur.[29]

Protecting Their Intellectual Assets: Appropriability Conditions and Why U.S. Manufacturing Firms Patent (or Not) (Natl. Bureau of Econ. Research Working Paper No. W7552, Feb. 2000), *available* at http://www.nber.org/papers/w7552, last visited Aug. 9, 2006).

[28] Barton, *Non-Obviousness*, *supra*, at 506. *See* Duffy & Merges, *supra*, at 152 (describing how, once a market developed, "the problem of streamlining a[n] internet checkout was easily solved," requiring only "the obvious application of existing techniques to a new problem").

[29] *See, e.g.*, Rich, *supra*, at 81-82 (discussing "the constant increment of improvements on what we already have," without explaining how to differentiate between improvements produced "by the expected skill of ordinary workers in the arts and by the unobvious developments which would not occur spontaneously from the application of such ordinary skill").

The *Graham* formulation also contains a conceptual problem that encourages errors of analysis. Although a patent provides an economic incentive, this Court's case law makes clear that the obviousness determination is a technical judgment regarding the capability of those skilled in the art to make the invention. Obviousness does not and should not normally involve any consideration of the economic motivations in the art to create the invention.[30]

A clearer restatement of the purpose of the obviousness standard is thus needed. Historians suggest that the Court hold that the obviousness inquiry is designed to prohibit patents on inventions that could have been made by those skilled in the art within a reasonable period of time (following the time that the invention at issue was actually made) and within reasonable budgetary constraints. Historians believe that this standard is implicit in the Court's holding in *Hotchkiss* that an invention is unpatentable if it requires "no more ingenuity or skill ... to construct ... than that possessed by an ordinary mechanic acquainted with the business." 52 U.S. (11 How.) at 265.[31] Some threshold of time and effort is required to distinguish patentable from unpatentable inventions. The Court's precedents regarding combinations functioned as a proxy for directly assessing how quickly the invention would be "devised or disclosed" and

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[30] There may be some rare inventions that are so costly and so risky that the ability to recoup investments must be considered preconditions to the ability of those skilled in the art to make them. But the level of skill in the art presumes a reasonable research budget and the ability to engage in routine development risks. *See* Robert P. Merges, *Uncertainty and the Standard of Patentability*, 7 High Tech L.J. 1, 48-62 (1992).

[31] *See* Duffy & Merges, *supra*, at 117 (discussing the "persistent application of ordinary skills" and the "greater level of skill" required by *Hotchkiss*, in regard to technical problems solved "after a few months of modestly ingenious effort").

whether that should be considered quickly enough. Direct assessment of these questions requires more explicit application of technical expertise and more explicit articulation of policy judgments.

Because inventive efforts are limited by time and budgetary constraints, persons having ordinary skill in the art normally will experiment only with combinations having reasonable expected probabilities of discovering new or improved functions. Unless the reward is particularly great or they have unusually large institutional or individual resources, ordinary artisans cannot experiment with every possible combination. For this reason, this Court held in the companion case to *Graham* that the ability to repetitively combine all known prior art substitutes does not necessarily demonstrate obviousness, particularly if the prior art discouraged an expectation of success (which is commonly referred to as teaching away from the solution). *See United States v. Adams*, 383 U.S. 39, 51-52 (1966) (the combination battery at issue required a person skilled in the art to "ignore . . . long-accepted factors, [that] when taken together, would, we believe, deter any investigation into such a combination").[32] Conversely, as recognized by the Court in *Concrete Appliances Co.*, once an exogenous technology shift occurs, skilled artisans will rapidly apply new technology to create new machines and processes having improved functions that

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[32] *See, e.g., Novo Industri A/S v. Travenol Labs., Inc.*, 677 F.2d 1202, 1208 (7th Cir. 1982) (discussing finite research time); *In re Antonie*, 559 F.2d 618, 620 (C.C.P.A. 1977) (stating that ignoring unexpected results by focusing on "'obvious to try'" experimentation is inconsistent with the second sentence of § 103); *In re Tomlinson*, 363 F.2d 928, 931 (C.C.P.A. 1932) (stating that an "'obviousness to try'" approach to patentability would result in "a marked deterioration" of incentives to invest in research).

earlier would have been thought unlikely to succeed. *See* 269 U.S. at 284.[33]

Significantly, the restatement Historians propose, like the case law it derives from, poses only a technical question. It requires determination of the expectation of success in achieving an inventive contribution of a particular magnitude within reasonable (as determined by the Patent Office or the courts) time and budgetary constraints. Nothing in this standard requires evaluation of motivations – economic or otherwise – to make the invention at issue, even though a patent might provide economic motivations to do so. Rather, the standard takes into account the degree of innovation that would occur in a field without considering patentability.

This restatement accords with this Court's holdings in *Graham* and *Adams*, as well as its earlier and later cases. In contrast, the teaching, suggestion, or motivation to combine test "created by the Federal Circuit"[34] and applied in this case conflicts with this Court's cases. For example, under the Federal Circuit's test, the inventions in *Graham* should have been deemed nonobvious, as there was no explicit or implicit teaching, suggestion, or motivation in the prior art to combine the known mechanical parts.[35] In contrast, under the Federal

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[33] *Cf.* Greg Blonder, Cutting Through the Patent Thicket; The current U.S. system is harming innovation. A simplified process with stronger patents would encourage economic growth, Business Week Online (Dec. 20, 2005) (discussing how AT&T took old microwave patents and filed identical claims on optical inventions, once the ability developed to make things smaller).

[34] Chief Judge Paul R. Michel, "The State of the Court," at 9 (Federal Circuit Bar Association Annual Conference, June 29, 2006, revised July 10, 2006), *available* at http://www.fedcir.gov/speech.pdf (last visited Aug. 9, 2006).

[35] *See, e.g.*, 383 U.S. at 24-25 ("We assume that the prior art does not disclose such an arrangement. . . . Certainly a person having

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Circuit's test, the chemical combination in *Adams* would have been unpatentable based on a prior art suggestion to combine.[36]

Given the restatement proposed here, the Court can also further clarify the methodology adopted in *Graham*.[37] As the Court held in *Graham*, obviousness or nonobviousness "is determined" "[a]gainst th[e] background" of: (1) determining "the scope and content of the prior art"; (2) ascertaining the "differences between the prior art and the claims at issue"; and (3) resolving "the level of ordinary skill in the pertinent art." 383 U.S. at 17. Circumstantial evidence of these facts may be considered in determining obviousness. But such secondary consideration evidence should be used only to supplement the factual background against which to legally determine obviousness. *See id.* at 17-18 ("Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light *to the circumstances surrounding the origin* of the subject matter sought to be patented.") (emphasis added). Secondary

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ordinary skill in the prior art . . . would immediately see that the thing to do was what Graham did. . . ."); *id.* at 30, 35 ("the [appeals] court found 'nothing in the prior art suggesting Scoggin's unique combination of these old features'. . . . The substitution of a rib built into a collar likewise presents no patentable difference above the prior art.").

[36] In *Adams*, the prior art suggested combination of magnesium and cuprous chloride for batteries, but because the invention accomplished unexpectedly good results using water as an electrolyte (the problem to be solved) the Court concluded that the combination reflected an "interdependent functional relationship" and more than "mere substitution" of prior art designs. 383 U.S. at 50-51.

[37] *See* 383 U.S. at 18-19 (emphasizing the need for the Patent Office to follow the same approach to obviousness determinations to avoid litigating validity after the fact – thereby "debilitat[ing] the patent system" – and to provide a closer correlation of judicial and administrative practice).

considerations (particularly regarding motivations) do not themselves determine obviousness.

Because the "ultimate question of patent validity" is a question of law, obviousness (one of the "three conditions" of validity) also is a question of law. *Id.* Like any legal question, obviousness "lends itself to several basic factual inquiries," upon which legal judgment must operate. *Id.* Given the restatement proposed here, the legal judgment applied to the factual background requires both an expert technical assessment of how quickly the art would have developed the capability to make the invention (given reasonable budgetary constraints) and a policy judgment of whether it would have developed that capability quickly enough. The expert assessment determines when the public would possess the knowledge without the inventor's contribution, and thus could make unrestricted use of the technology. The policy judgment determines what budgetary constraints are considered reasonable and whether the public would have had to wait an unreasonably long time.[38]

Without additional legislative guidance, the courts (or the Patent Office[39]) must develop policies through the "abundance

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[38] How long the public should have to wait will depend on the importance of the invention. The legal question requires balancing the benefits of earlier public acquisition with the costs of exclusive rights. Thus, Congress originally required judgments by the Patent Office (replaced by the obviousness standard) that an invention must be sufficiently useful and important. *See supra* at 3 & n.2. Similarly, Congress initially and the courts subsequently held that certain categories of inventions either were not sufficiently important or were already within the public's constructive possession at the time of invention. *See supra* at 3-4, 5 & n.7, 6-12.

[39] The Patent Office likely possesses discretion to adopt policies in individual adjudications, given the need to apply the obviousness standard when exercising examination authority. *See* 35 U.S.C. § 131. However, the Patent Office may be foreclosed from adopting such policies by legislative (but not interpretive) rules, as the Federal Circuit

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of cases which [have] not be[en] brought under rule, until they should have presented themselves under all their aspects. . . ." Jefferson, Letter, *supra*, at 532. However, this Court has not yet provided sufficient guidance regarding how to make the requisite technical predictions and policy judgments. In the absence of clearer guidance, the courts have often reached conclusions that are not compelled by the facts and that lack persuasive, articulated rationales.

For example, in the Barbed Wire patent case[40] the Court carefully described the prior art and the differences between it and the claimed double-stranded, coiled-barbed-wire invention (which better secured the barb to the wire), as well as secondary considerations of long-felt need, failure of others to make the necessary substitution, and commercial success.[41] After its careful recitation of the facts,

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has repeatedly held that the Patent Office lacks substantive rulemaking authority. *See, e.g., Merck & Co., Inc. v. Kessler*, 80 F.3d 1543, 1549-50 (Fed. Cir. 1996); *Animal Legal Def. Fund v. Quigg*, 932 F.2d 920, 930 (Fed.Cir.1991).

[40] *Washburn & Moen Mfg. Co. v. Beat 'Em All Barbed-Wire Co.*, 143 U.S. 275 (1892). This case also is significant because of the Court's stated reluctance to credit oral testimony regarding prior invention, leading to adoption of corroboration rules and to a judicially imposed clear and convincing evidentiary presumption of validity. *See id.* at 284-92; *Hybritech Inc. v. Monoclonal Antibodies., Inc.*, 802 F.2d 1367, 1375-76 (Fed. Cir. 1986). When codifying the presumption of validity in Section 282, Congress did not freeze the Court's ability to vary the strength of presumptions for different facts affecting legal judgments of validity. The U.S. Federal Trade Commission has called for removal of such a strong factual presumption. *See* FTC, To Promote Innovation: The Proper Balance of Competition and Patent Law and Policy, at ES-8 to ES-10 (Oct. 2003), *available* at http://www.ftc.gov/os/2003/10/innovationrpt.pdf (last visited Aug. 9, 2006) (FTC, To Promote Innovation).

[41] *See* 143 U.S. at 281-84. The Court was careful to note that the secondary consideration evidence did not create an invariable rule of decision and that commercial success and widespread adoption did not establish patentable invention in all cases. *See id.* at 283-84 (citing

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however, the Court conclusorily held that because the inventor's invention, disclosure and use had led to widespread adoption of the technology, "we think the doubts we entertain concerning the actual inventor of this device [given that it may have been developed by accident earlier] should be resolved in favor of the patentee." *Id.* at 292. The Court's reasoning conflates novelty with obviousness,[42] and fails to explain why the combination was patentable. *See id.* at 283-84 (discussing the conflicting precedents but failing to articulate why those relied upon were more applicable to the facts).

Even after *Graham*, sufficient guidance to ground reasoned judicial decisionmaking has been lacking. For example, in the case at hand, the Federal Circuit failed to articulate any relevant and persuasive reasoning for reversing the District Court. *See Teleflex Inc.*, 119 Fed. Appx. at 286-88 (acknowledging that the prior art contained all of the elements of the combination and describing the grounds for the District Court's factual findings of a suggestion to combine); *id.* at 288 (requiring that "the nature of the problem to be solved be such that it would have led a person of ordinary skill in the art to combine the prior art teachings in the particular manner claimed," *i.e.*, "when two prior art references address the precise problem that the patentee was trying to solve," and concluding that the prior art references did not address the precise problem). Like the reasoning in the Barbed Wire patent case, the Court of Appeals reasoning here apparently conflated nonobviousness with novelty[43]

Webster Loom Co. v. Higgens, 105 U.S. 580, 591 (1881), and *Smith v. Goodyear Dental Vulcanite Co.*, 93 U.S. 486, 495 (1876)).

[42] *See id.* (Field, J. dissenting "upon the ground there was no novelty in the invention").

[43] *Cf.* Barton, *Non-Obviousness*, *supra*, at 482-83 ("The MPEP's demand that there be suggestions in the prior art as a pre-requisite to

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and failed adequately to explain why the combination was patentable. Like the Barbed Wire patent case, the Court of Appeals decision fails to distinguish (much less provides a reason to ignore) this Court's precedents holding that new combinations were obvious when they lacked any unexpected function or simply applied existing technology to a new use (which appears to be the case here from the undisputed facts in the record). Nor does it provide any explanation of why the combination was a significant achievement, even if it had not previously been "contemplated." *Penn. R. Co.*, 110 U.S. at 494. Unless the Court overrules its precedents, the patent at issue in this case does not appear sustainable.

The Federal Circuit's teaching, suggestion, or motivation to combine test, moreover, conflicts with this Court's approach to obviousness in a number of important ways.[44] First, it wrongly imposes an additional and unwarranted evidentiary requirement on the legal judgment of obviousness,[45] in a misguided effort to prevent "hindsight" bias. *In*

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combine references converts non-obviousness to something near novelty.").

[44] Existing Patent Office guidance to examiners also conflicts with this Court's jurisprudence, as it is based on the Federal Circuit's (and its predecessor's) jurisprudence. *See, e.g.*, Manual of Patent Examining Procedure §§ 2144.06, 2143.01 (8th ed. Rev. 3 2005); Barton, *Non-Obviousness*, *supra* at 480-81 (discussing the requirement for the prior art to suggest substitution of equivalents); *id.* at 481-82 (discussing the requirement for a prior art suggestion of the desirability of making the combination).

[45] Historians note here their general support for the merits amicus brief filed in support of Petitioner by Intellectual Property Law Professors, and specifically agree that the teaching, suggestion, or motivation test improperly converts a legal judgment into a question of fact. Counsel of Record and some of the Historians were signatories to the brief of Twenty-Four Intellectual Property Law Professors at the petition stage.

re Kahn, 441 F.3d 977, 986-87 (Fed. Cir. 2006).[46] As noted above, prior art suggestions to combine could demonstrate obviousness, but were not previously required in order to do so. The Federal Circuit test thus fails to permit consideration of developments in technology or motivations shortly before the date of invention, which had not yet resulted in contemplation of the particular combination. It thereby eliminates "foresight" that was part of the skill in the art at the time of invention. As recognized by Justice Frankfurter in dissent in *Marconi Wireless Telegraph Co. of Am. v. United States*, 320 U.S. 1 (1943), the "real question is how significant a jump is the new disclosure from the old knowledge." *Id.* at 62. After warning against "[r]econstruction by hindsight," Justice Frankfurter emphasized that "the history of thought records striking coincidental discoveries – showing that the new insight first declared to the world by a particular individual was 'in the air' and ripe for discovery and disclosure." *Id.* For this reason, the Court held in *Concrete Applications Co.* that substantial attention must be paid to developments in technology just before the invention was made. *See* 269 U.S. at 184.[47]

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[46] *See id.* at 988 (discussing the requirement for the Patent Office to provide "some articulated reasoning with some rational underpinning," but inappropriately citing to *In re Sang Su Lee*, 277 F.3d 1338, 1343-46 (Fed. Cir. 2002), which requires highly specific factual findings reviewed for substantial evidence).

[47] This does not mean that all simultaneous inventions should be considered to have been obvious at the time they were made. *See, e.g.*, Joel Mokyr, *Why Was the Industrial Revolution a European Phenomenon*, 10 Sup. Ct. Econ. Rev. 27, 54 (2003) ("The emergence of a minimum epistemic base is a necessary but insufficient condition for a new technique to be invented."). Thus, perhaps the most famous "simultaneous" discovery – the theory of evolution by natural selection, by Charles Darwin (in basic concept by 1838 and more fully by 1842) and by Alfred Russel Wallace (at least by 1858) – reflected such a significant advance

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Second, the Federal Circuit's test improperly raises the unwarranted evidentiary burden even higher, by requiring prior art references that might suggest the combination to address the "precise problem" solved by the patentee. *Teleflex Inc.*, 119 Fed. Appx. at 288. This eviscerates the "analogous arts" doctrine, which had defined the contents of the prior art available to skilled artisans. *See Dann v. Johnston*, 425 U.S. 219, 227-29 (1976); *In re Clay*, 966 F.2d 656, 658-59 (Fed. Cir. 1992). Under that doctrine, once the reference was held analogous, it was available without restriction both for combination of its contents and for what it contemplated.

Third, the Federal Circuit's test converts the technical capability of the skilled artisan into a business motivation or research imperative, *i.e.*, it changes the potential to create the invention from a "could" into a "would." *See, e.g., Kahn*, 441 F.3d at 988 ("'[would] an artisan . . . confronted by the same problems . . . have selected the various elements . . . and combined them in the manner claimed'") (quoting *Princeton Biochemicals, Inc. v. Beckman Coulter, Inc.*, 411 F.3d 1332, 1337 (Fed. Cir. 2005)). This conflicts with this Court's precedents holding that, absent unusual functions in the combination, the person skilled in the art is presumed capable of making substitutions of known elements without regard to motivations to do so. *See, e.g., Dunbar*, 94 U.S. at 199.

Fourth, the Federal Circuit's test and related doctrinal developments alter the *Graham* approach to secondary

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over prior knowledge it dramatically changed human history (although as a scientific theory it was not a patentable invention). *See* Niles Eldredge, Darwin, Discovering the Tree of Life 10-18, 43-53 (W.W. Norton & Co. 2005) (discussing the factual context for evaluating the scientific contribution). Nevertheless, given a certain basis of knowledge, institutional set-up, and luck, "many inventions or their equivalents seem to have been quite probable *ex ante* and a few inevitable." Mokyr, *supra*, at 38.

considerations. *Graham*, like earlier cases, expressed skepticism regarding the relevance and strength of secondary consideration evidence.[48] The Federal Circuit, however, has required that secondary consideration evidence always be considered, regardless of the results of the direct technological inquiry.[49] The Federal Circuit thus has elevated secondary considerations into a "quasi-presumption" of patentability.[50] Secondary consideration evidence cannot establish a prima facie case of obviousness that requires a teaching, suggestion, or motivation to combine in the prior art; it can be used only to rebut such a case. As this Court has recognized, however, commercial success evidence is highly suspect, because "market-related factors, as opposed to sheer technological superiority" are theoretically and empirically much more likely to determine commercial success.[51] Although failure of others is a better and more direct indicator of technological achievement,[52] it also must be subjected to careful scrutiny, particularly given the phenomenon of simultaneous invention. *See, e.g., Toledo Pressed Steel Co.*, 307 U.S. at 356 (discounting evidence

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[48] *See* 383 U.S. at 36 ("these factors do not . . . tip the scales of patentability" in light of the "small and non-technical mechanical differences," particularly given constructive availability of a prior art patent that made the prior failures of others "wholly irrelevant").

[49] *See, e.g., Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538 (Fed. Cir. 1983).

[50] *See* Robert P. Merges, *Commercial Success and Patent Standards: Economic Perspectives on Innovation*, 76 Cal. L. Rev. 803, 823-42 (1988) (Merges, *Commercial Success*).

[51] *Id.* at 846. *See id.* at 852 (discussing improper inferences that result from commercial success where firms have reasons to avoid experiments). *Cf.* Rich, *supra*, at 84 (commercial success evidence would require "value judgments of a kind [the Patent Office and courts] are not equipped to make" and such evidence is rarely available at the time of patenting).

[52] *See* Merges, *Commercial Success*, *supra*, at 862-66.

regarding two prior failures unaccompanied by evidence of awareness of the relevant prior art, and noting the absence of any evidence of "widespread effort to solve the problem here involved").

III. The Court Should Clarify the Burdens of Production and Proof Regarding the *Graham* Factors.

Substantial costs of error result from misapplying the obviousness standard and issuing patents on obvious inventions.[53] To minimize such errors, the Court should clearly articulate the burdens of production and proof in making obviousness determinations. Given the limited resources of the Patent Office, the current allocations may often be outcome dispositive and may frequently lead to erroneous results.[54]

The Patent Act has been interpreted by the Federal Circuit and its predecessor to impose a burden of production and proof regarding obviousness on the Patent Office.[55] In light of the discussion above, it is critical that the Court make clear that no evidentiary burden is placed on the Patent Office (or the party contesting validity in infringement litigation) to document a teaching, suggestion, or motivation in the prior art to make the invention at issue. The evidentiary burden

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[53] *See* Barton, *Non-Obviousness*, *supra*, at 495.

[54] *See* FTC, To Promote Innovation, *supra*, at V-4 to V-24 (discussing current burdens of effective examination, data on patent quality, the need for more resources, and recommending post-grant oppositions to address the numerous invalid patents that predictably issue); Barton, *Non-Obviousness*, *supra*, at 482-83 (nonobviousness "is ultimately predicated on whether there is an adequate body of literature that is accessible to patent examiners to render a determination of patentability.").

[55] *See, e.g., In re Piasecki*, 745 F.2d 1468, 1472 (Fed. Cir. 1984) (citing *In re Warner*, 379 F.2d 1011, 1016 (C.C.P.A. 1967)).

relates to the contents of the prior art and to skill in that art, not to the legal judgment of whether the invention reflects a sufficient technological advance.

At one time the Federal Circuit's predecessor adopted presumptions of *unpatentability* regarding certain types of inventions.[56] These presumptions shifted to applicants the burdens of production and proof of obviousness in the Patent Office. Historians encourage the Court to examine its precedents regarding combination and other inventions, to articulate the burdens of production and proof of nonobviousness or obviousness in the Patent Office and in infringement litigation. In doing so, the Court should specify what authority the Patent Office and lower courts possess to adopt additional presumptions that shift the burdens to applicants or patentees, who are the parties most likely to possess relevant information and incentives to disclose it.

Prior decisions of this Court have been extended by the Federal Circuit to convert the presumption of validity under 35 U.S.C. § 282 into a strong evidentiary hurdle in infringement litigation,[57] notwithstanding the level of Patent Office review of the relevant evidence. Historians encourage the Court to clarify its earlier statements. In particular, the Court should clarify that a clear and convincing burden of proof should not apply to issues for

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[56] *See, e.g., Piasecki*, 745 F.2d at 1472 (citing, *e.g., In re Henze*, 181 F.2d 196, 201 (C.C.P.A. 1950), and *In re Surrey*, 319 F.2d 233, 235 (C.C.P.A. 1963)).

[57] *See* Matthew D. Henry & John L. Turner, *The Court of Appeals for the Federal Circuit's Impact on Patent Litigation*, 35 J. Legal Stud. 85, 114 (2006) (noting that the Federal Circuit's "stronger presumption of validity" has resulted in a three-fold increase in success in overcoming district court invalidity decisions on appeal, which decisions district courts make half as often as before and patentees appeal twenty-five percent more often).

which the relevant evidence was not previously considered by the Patent Office.[58]

Finally, Historians encourage the Court to adopt a burden-shifting approach to the *Graham* methodology. If a prima facie case of obviousness or nonobviousness can be made based on the facts regarding the prior art and skill, the burdens of production and proof should then shift to rebut that conclusion using secondary consideration evidence (and then only for its bearing on the technological creativity involved). This appears to have been the structure contemplated by *Graham*, when holding that it is "[a]gainst this background [that] the obviousness or nonobviousness of the subject matter is determined" and that when the level of technological creativity has already been demonstrated, secondary considerations are "wholly irrelevant." 383 U.S. at 17, 36.

CONCLUSION

Historically, the Supreme Court has held inventions to a reasonably high standard of technological creativity in order to warrant a patent. The Federal Circuit's teaching-suggestion-motivation test as applied in this case deviates from this historical standard, and thus the judgment of the Court of Appeals should be reversed.

Respectfully submitted,

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[58] *Cf. Corning v. Burden*, 56 U.S. (15 How.) 252, 271 (1853) ("a patent, thus issued after an inquisition or examination . . . is entitled to much more respect, as evidence of novelty and utility, than those formerly issued without any such investigation.").

APPENDIX A – AMICI CURIAE*

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